

**Notice of Allowability**

Application No.

10/664,413

Examiner

Hoang V Nguyen

Applicant(s)

CHIANG ET AL.

Art Unit

2821

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 17 September 2003.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☒ The drawings filed on 17 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

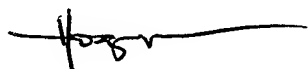
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 7/12/04 & 9/10/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.



**HOANG V. NGUYEN  
PRIMARY EXAMINER**

*Allowable Subject Matter*

1. Claims 1-42 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, Gothard et al (US 6,600,456 B2) discloses an antenna assembly comprising an active antenna element 706 disposed between multiple passive elements 701-705. Gothard, however, fails to specifically teach a configuration comprising multiple active antenna elements; and at least one beam control antenna element electromagnetically coupled to a subset of the active antenna elements and electromagnetically disposed between at least two of the active antenna elements.

Claims 2-20 are allowed for depending on claim 1.

Regarding claim 21, Gothard et al fails to specifically teach a method for supporting RF communications comprising the steps of forming at least one antenna beam pattern by multiple active antenna elements; and affecting the at least one antenna beam pattern by at least one beam control antenna element electromagnetically coupled to and electromagnetically disposed between at least two of the active antenna elements.

Claims 22-40 are allowed for depending on claim 21.

Regarding claim 41, Gothard et al discloses an antenna assembly comprising an active antenna element 706 disposed between multiple passive elements 701-705. Gothard, however, fails to specifically teach a configuration comprising multiple active antenna elements; and beam control means for affecting at least one antenna beam pattern formed by the multiple active

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elements, the beam control means electromagnetically coupled to and electromagnetically disposed between at least two of the active antenna elements.

Regarding claim 42, discloses an antenna assembly comprising an active antenna element 706 disposed between multiple passive elements 701-705. Gothard, however, fails to specifically teach a configuration comprising multiple active antenna elements; and at least one beam control antenna element electromagnetically coupled to the active antenna elements and electromagnetically disposed between at least two of the active antenna elements; and means for adjusting a reactance of the at least one passive antenna element to effect at least one antenna beam pattern formed by the antenna assembly.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,788,268 B2 and US 2003/0048226 A1 disclose antenna array comprising an active antenna element arranged with a plurality of passive antenna elements.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn  
1/5/05



**HOANG V. NGUYEN**  
**PRIMARY EXAMINER**